

Current Indoor airPLUS Policy Record

Purpose

EPA regularly receives partner questions and comments regarding various aspects of the Indoor airPLUS program requirements. This Policy Record format will be used to provide regular updates on the resolution of future issues, including changes to program requirements and clarifications or refinements to the specifications. The primary purpose of this document will be to allow stakeholders equal access to the latest policy issues and resolutions. This document will also act as an official program update.

How to Use this Document

Included in the chart below are questions and issues that have arisen since the release of Revision 1 of the Indoor airPLUS Construction Specifications. For each issue, the following items will be listed:

- Identification Number
- Log Date
- Issue Classification
- Issue Description
- Resolution

Please submit any comments on the Policy Record via email to Indoor_airPLUS@epa.gov.

Issue Classifications

Each issue listed here is classified as a Change, a Clarification, a Refinement, a Comment or an Issue Under Review. These are defined as follows:

Change – The addition, deletion or modification of a program requirement. A change will typically result from a partner question or feedback indicating that EPA's original intent is not being met or from changes in relevant standards. A change is the most significant type of edit for partners because it is likely to change the way that partners comply with the program.

Clarification – The clarification of a program requirement, typically resulting from a partner question indicating confusion or ambiguity. Clarifications are not intended to significantly change the scope of the program guidelines, but rather to clarify the original intent of the requirement. A clarification is secondary in importance to a change; it should not significantly alter the way that most partners comply with the program.

Refinement – A minor revision, such as an improved choice of words, a grammatical correction or a correction to a typographical error. A refinement is the least important type of edit; it should have no impact on the way that partners comply with the program.

Comment – A comment provided by EPA in response to a question, which results in no change to the program documents. This may occur, for example, if the question can be answered by referring to already established policy. Aside from the partner asking the question, such comments will typically have no impact on the way that partners comply with the program.

Issue Under Review – An issue that has been submitted and that EPA is still evaluating. Once EPA has evaluated the issue, it will offer a resolution and re-classify the issue using one of the four categories above.

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ID	Log Date	Classification	Topic
0001	07/25/2013	Issue Under Review	Garage exhaust fan
			<p>Issue: Since the inception of the Indoor airPLUS Program, EPA has received extensive feedback from prospective and active Indoor airPLUS partners questioning the technical rationale for requiring installation of exhaust fans in attached garages (Section 5.4) and expressing concern about the cost associated with the requirement in the absence of data demonstrating the benefits to homebuyers. Partner observations fall into two categories: 1) The ENERGY STAR and Indoor airPLUS air sealing requirements provide adequate protection against the infiltration of garage pollutants into the home; and 2) an exhaust fan in the garage is not needed because the typical attached garage is outside of the conditioned space, not routinely used as living space, and there is already substantial air leakage between the garage and the outdoors.</p> <p>Resolution: [Issue under review.]</p>
0002	07/25/2013	Change	Aggregate or sand drainage layer (Sec. 1.2 Capillary Break Installation)
			<p>Issue: Partners have questioned whether the requirement of an aggregate or sand drainage layer under slabs improves moisture control sufficiently to warrant the increased cost. The question was specifically raised for homes built in areas with free draining soils.</p> <p>Resolution: Indoor airPLUS requires a drainage plane beneath slabs in order to prevent liquid water, moisture and, in EPA Radon Zone 1, soil gas infiltration into the home. Rough aggregate is the preferred method to achieve this intent, as it eliminates the ability of water to wick towards the slab. However, since aggregate is not readily available in all areas, the option to use sand has been provided.</p> <p>EPA recognizes that there are situations in which wicking of moisture through the slab is of minimal concern, such as in dry climates, and has previously provided an exemption from this sub-slab drainage layer for dry climates as defined by 2009 IECC Figure 301.1, not including EPA Radon Zone 1 areas. EPA recognizes that homes in areas with free-draining soils and slab-on-grade foundations are also situations in which water accumulation under the slab is a less significant concern. As such, additional exceptions for homes in non-Radon Zone 1 areas with free-draining soils and slab-on-grade foundations will be added to the Indoor airPLUS Construction Specifications. Section 1.2 will be revised as follows:</p> <ul style="list-style-type: none"> • Under the polyethylene sheeting or extruded polystyrene (XPS) insulation installed to meet ENERGY STAR Water Management System Builder Checklist Item 1.3: <ul style="list-style-type: none"> ○ Install a 4 in. layer of 1/2 in. diameter or greater clean aggregate; OR ○ Install a 4 in. uniform layer of sand, overlain with either a layer of geotextile drainage matting throughout or strips of geotextile drainage matting along the perimeter installed according to the manufacturer's instructions. ○ Exceptions (Not applicable in EPA Radon Zone 1): <ul style="list-style-type: none"> ▪ Dry climates, as defined by 2009 IECC Figure 301.1. ▪ Areas with free-draining soils – identified as Group 1 (Table R405.1, 2009 IRC) by a certified

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			hydrologist, soil scientist or engineer through a site visit. <ul style="list-style-type: none"> ▪ Slab-on-grade foundations.
0003	07/25/2013	Clarification	Separate verification checklist for each unit in multifamily buildings
			Issue: Partners have inquired as to whether a separate Verification Checklist needs to be completed for each unit in multifamily buildings, or if a single checklist can include more than one unit if an approved sampling method is used.
			<p>Resolution: Indoor airPLUS requires the same field verification requirements for multifamily units as it does for single-family homes. These requirements include field inspection and testing of each individual unit for builder-verified checklist items, and the option to use the RESNET Sampling Protocol for Rater-verified items only*. As with single-family homes, all units batched into a RESNET Sample set must still have an address-specific certificate attached to the home or unit. In the case of Indoor airPLUS, the certificate, label and Indoor airPLUS Verification Checklist (see Specification 7.3) or comparable information must be provided to each owner. Thus, a separate checklist must be filled out for each unit address.</p> <p>*Raters who operate under a Sampling Provider are permitted to use the RESNET-approved sampling protocol for homes located outside California, and the CEC-approved sampling protocol for homes located in CA, to verify the Minimum Rated Features of the home. Raters who do not operate under a Sampling Provider must verify these requirements in each certified home.</p>
0004	07/25/2013	Clarification	ENERGY STAR Multi-family High Rise Program buildings not eligible for Indoor airPLUS
			Issue: Partners have inquired whether multifamily units in buildings that are certified through the ENERGY STAR Multifamily High Rise Program are eligible for Indoor airPLUS.
			<p>Resolution: Multifamily units in buildings that are certified through the ENERGY STAR Multifamily High Rise Program are ineligible for Indoor airPLUS certification at this time. Because the Indoor airPLUS Program works in concert with the ENERGY STAR Certified Homes Program (low rise), only multifamily units that are eligible to participate in the Certified Homes Program are eligible for Indoor airPLUS Certification. In general, this includes all buildings with 1-3 stories and some buildings with 4-5 stories (depending on heating and cooling systems and percentage of residential space). For more information about the ENERGY STAR eligibility requirements for multifamily buildings, please see the Multifamily Decision Tree. http://www.energystar.gov/ia/partners/bldrs_lenders_raters/downloads/mfhr/MFHR_Flowchart_Version_1.0.pdf?4b4b-7ba8</p>
0005	07/25/2013	Clarification	Allowance for XPS Insulation under slab in conjunction with polyethylene sheeting (Sec. 1.2 Capillary Break Installation)
			Issue: The Note following Section 1.2 (Capillary Break Installation), which applies to slab-on-grade construction in EPA Radon Zone 1, includes a bullet stating “Do not use extruded polystyrene (XPS) insulation beneath concrete slabs, including basement floors.” Partners have requested clarification of the reasoning behind this prohibition, given the significant insulation benefits from using XPS under the slab.

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			<p>Resolution: In EPA Radon Zone 1, EPA requires the installation of a 6 mil polyethylene vapor barrier to prevent entry of radon gas into the home through cracks or other penetrations of the slab. The bullet precluding use of XPS insulation was meant to indicate that XPS could not be used <i>in lieu of</i> polyethylene sheeting under the slab because XPS does not serve as an adequate vapor barrier to protect against radon infiltration. However, EPA does not intend to preclude the use of XPS under the slab <i>in addition to</i> the 6 mil polyethylene sheeting.</p> <p>Since polyethylene sheeting is specifically required in EPA Radon Zone 1, the bullet precluding the use of XPS insulation creates unnecessary confusion and will be removed from the Indoor airPLUS Construction Specifications. Builders may use XPS under slabs in EPA Radon Zone 1, provided it is used in addition to the required 6 mil polyethylene sheeting. The note accompanying Section 1.2 will now read:</p> <p>Note: In EPA Radon Zone 1 (see Specification 2.1):</p> <ul style="list-style-type: none"> • Polyethylene sheeting must be installed and overlapped by 6 to 12 in. at the seams. • ENERGY STAR staking method for crawlspaces with no slab is not allowed.
0006	07/25/2013	Refinement	Verification checklist signature block
			<p>Issue: The Indoor airPLUS Revision 1 Construction Specifications Verification Checklist provides space for initials from Raters for the pre-drywall inspection and final verification and a space for builder initials for builder-verified items. A full signature block is not currently provided although the instructions require the Builder and Rater to sign the verification checklist.</p>
			<p>Resolution: EPA will revise the Verification Checklist to include signature lines for builders and Raters to sign the Verification Checklist once it is completed. The Revision 1 Verification Checklist may continue to be used, but builders and Raters should provide a signature in the initials block.</p>
0007	07/25/2013	Clarification	Carpeted area requiring CRI Green Label certification
			<p>Issue: A partner has asked whether a builder can avoid Carpet and Rug Institute (CRI) certification on carpets and adhesives if < 90 percent of the finished floor area is carpeted.</p>
			<p>Resolution: The current requirement states that carpets and carpet adhesives composing 90 percent or more of the finished surface area covered by such product use only products labeled with, or otherwise documented as meeting, the Carpet and Rug Institute's (CRI) Green Label Plus testing program criteria. The intent of this requirement is to ensure that the vast majority of carpet used on a project is certified low emission while allowing for small applications for which CRI certified products are not available. EPA is refining the language to read as follows:</p> <ul style="list-style-type: none"> • At least 90 percent of the surface area covered by carpet and carpet adhesives must use products labeled with, or otherwise documented as meeting, the Carpet and Rug Institute's (CRI) Green Label PLUS testing program criteria.

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0008	07/25/2013	Issue Under Review	Decorative gas logs
			Issue: Section 5.1 Combustion Equipment Located in Conditioned Spaces currently prohibits the use of decorative gas logs in Indoor airPLUS homes. Partners have asked whether decorative gas logs could be allowed if they meet the same requirements as natural gas and propane fireplaces (i.e., mechanically drafted or direct vented with permanently affixed glass front or gasketed door).
			Resolution: [Issue Under Review]